

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

690 Walnut Ave.St. 150

Vallejo, CA 94592-1133

(707) 649-5453

(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-012726**Date Inspected:** 17-Mar-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1100**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1930**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** Listed below.**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Orthotropic Box Girders (OBG)**Summary of Items Observed:**

The Quality Assurance Inspector (QAI), Scott Croff, was present at the Self Anchored Span (SAS) job site to observe the scheduled fabrication and welding of components for the SFOBB project. The following observations were made:

- 1) OBG L1E/L2E field splice welding (FSW) - plate E
- 2) OBG L1E/L2E - plate B
- 3) OBG L1E/L2E - plate D

1) The QAI observed ABF personnel welding plate E at L1E/L2E field splice. The QAI noted that this weld is complete joint penetration (CJP) with backing bars that will be removed. The QAI noted that (as previously reported) the backing bars are not continuous for the length of the splice. The QAI noted that the Quality Control (QC) Inspector Bernie Docena is monitoring this welding. The QAI observed ABF personnel Rory Hogan, ID 3186 and Jeremy Dolman, ID 5042, making the welds with Gas Shielded Flux Cored Arc Welding (FCAW-G). The QAI was informed that Welding Procedure Specification (WPS) ABF-WPS-D15-3042A-1 rev.0 is being used for this welding. The QAI noted that the weld portion from stiffener #1 (edge to plate F) to stiffener #11 is being welded. The QAI noted that the QC Inspector Bernie Docena is monitoring the welding at this location. The QAI randomly measured the preheat, interpass temperature and welding parameters and noted that they appeared to be conforming to the WPS requirements. This work was in progress until the end of the shift.

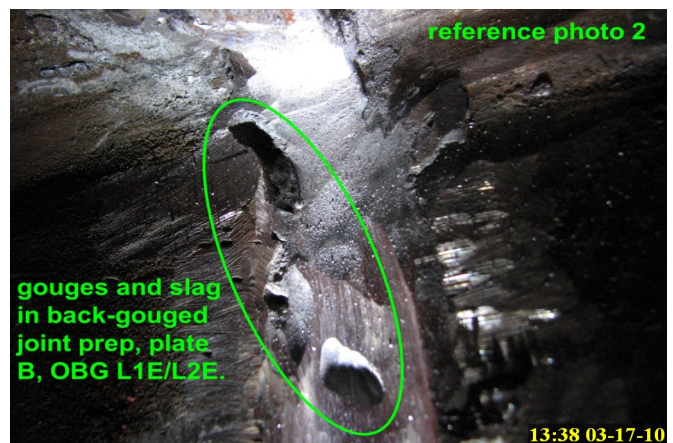
2) The QAI observed ABF personnel grinding clean the back-gouged weld of plate B at L1E/L2E. The QAI noted that the backing bar has been removed and the joint will be back welded. The QAI met with the QC Inspector

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James Cunningham and was informed that the back-gouged weld was acceptable after conducting magnetic particle testing (MT). The QAI made a visual examination of the back-gouge and noted that it does not appear to be acceptable for welding, per the contract requirements. The QAI noted that there is slag visible in the groove, there are sharp gouges and an un-even bevel preparation. The QAI also noted that there is still gouged metal bits visible in the groove and the backing bar at plate A intersection has not been removed yet. The QAI showed the QC Inspector these observed conditions and asked how could an MT of the joint preparation be acceptable when the weld has not been ground back to sound metal. The QC Inspector informed the QAI that he only conducted MT and did not observed any relevant indications. The QC Inspector was asked who has conducted the visual inspection and accepted this joint preparation. The QAI was informed that the QC Inspector did not know who has accepted the joint preparation. The QAI asked the QC Inspector if he thought the back-gouge and joint preparation were visually acceptable. The QAI was informed that the back-gouge would have additional grinding to sound metal for the joint preparation. See the attached photos of the weld joint / back-gouge after the initial MT. This work was in progress at the end of the work shift.

3) The QAI observed ABF personnel using plasma arc to remove the backing bar from the bottom of OBG L1E/L2E plate D field splice. The QAI observed that the plasma arc torch is set onto a semi-automatic track and is in the process of cutting through / gouging off the backing bars. This work was in progress at the end of the work shift.



Summary of Conversations:

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As noted above, the QAI had conversations with QC Inspectors and ABF personnel regarding the welding in progress. There were additional conversations regarding the joint preparation and MT of the plate B field splice. The QAI relayed the observations of welding and status of work to the QAI Bill Levell. The QAI also generated a shift turn-over report with this information. There were no other notable observations or conversations during this shift.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi, (916)813-3677, who represents the Office of Structural Materials for your project.

Inspected By:	Croff, Scott	Quality Assurance Inspector
Reviewed By:	Levell, Bill	QA Reviewer
